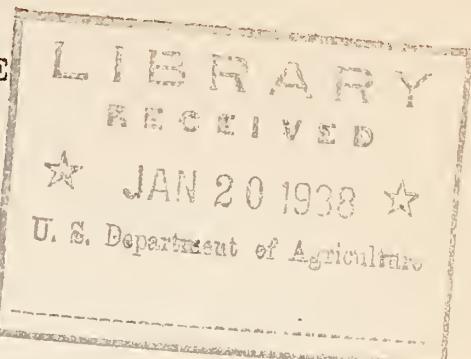


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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Region 8
Albuquerque, New Mexico



Hugh G. Calkins, Regional Conservator

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POLICY AND PRACTICES
GOVERNING CUTTING
OF
WOODLAND PRODUCTS

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POLICY AND PRACTICES GOVERNING CUTTING OF WOODLAND PRODUCTS
IN REGION 8

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The primary purpose in regulation of cutting of woodland products is to provide for useful material in a manner which will leave the woodland area in the best possible condition for soil and water conservation. Woodland areas, when properly managed, furnish cover and soil protection while producing a usable product, but the best interests of conservation are not always served in the removal of living cover for the construction of erosion control structures.

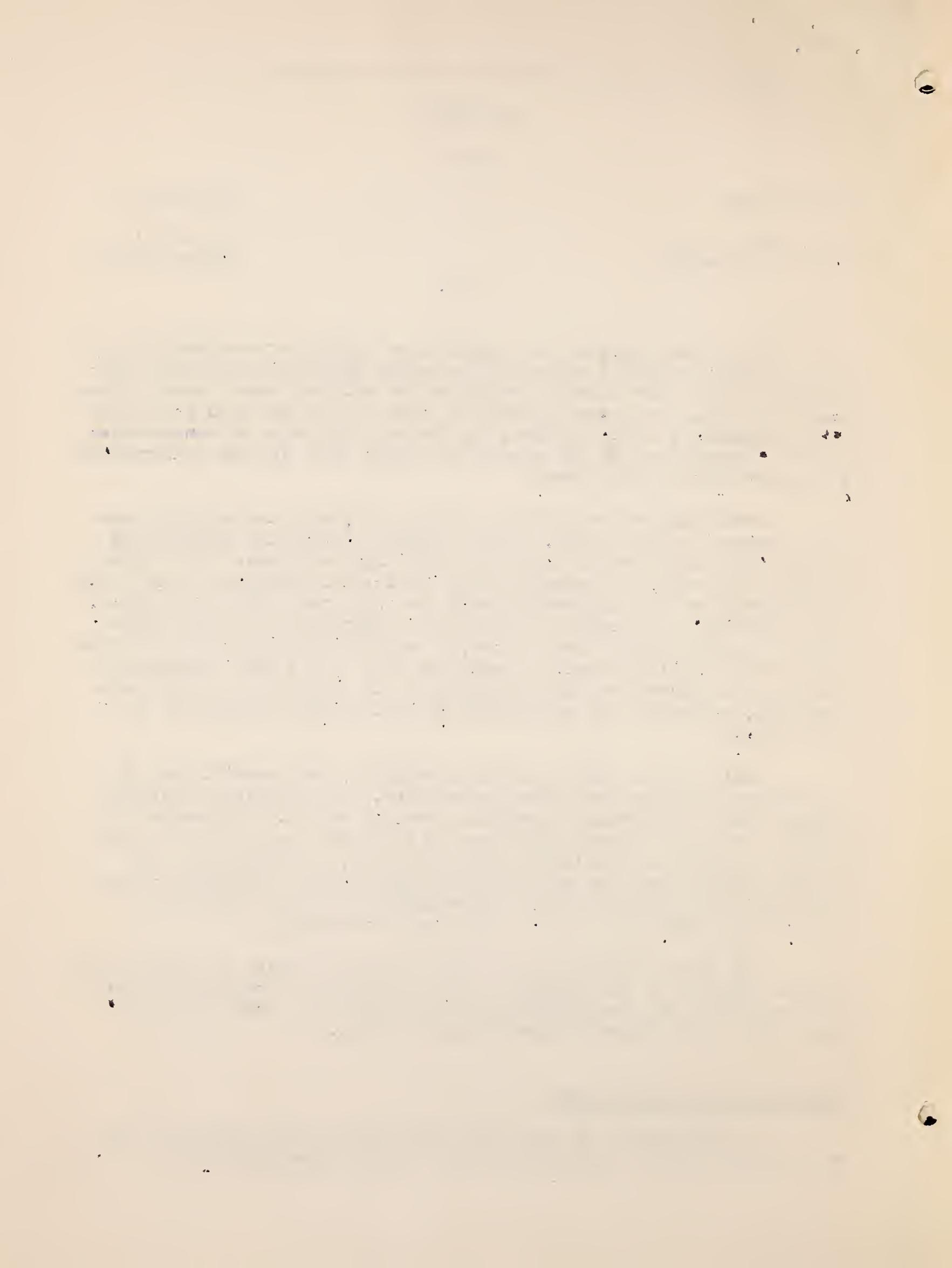
Good conservation practice consists of proper use of those natural resources which we have, and the cutting of woodland products may therefore be considered as one of our most important jobs. It is also a type of work which, if properly done, requires more supervision and training than most of the construction work for which the product is desired. Fence building is an example in that fence construction is more simple and more easily learned than the proper selection and production of fence posts from a woodland stand. In spite of this it has been common practice for work foremen to spend practically all their time on fence construction, entrusting the supervision of woods work to members of the fence crew.

While cutting can be generally outlined, each specific set of conditions calls for variations in practice, and considerable personal judgment must be exercised in marking trees to be cut. The marker must appraise the effect removal will have in relation to any given location, keeping in mind that the litter under the trees, as well as the root systems not only hold the soil in place but increase absorption and penetration of water by the soil. The production of future products is also of major importance in the selection of material.

The policy outlined here is to be used as a guide in cutting operations. Members of the Woodland staff will assist in training the project area technician and woods foreman in the actual field work on project areas and in the interpretation of marking rules.

Supervision and Organization

On each project or camp area doing any brush or timber cutting, one individual will be appointed to have direct supervision of all



cutting of woodland products. This individual will have supervision of and be held responsible for all cutting, and his duties will be so adjusted that ample time is available for proper supervision of woods crews. The Woodland section representative will be responsible to the District and Regional section of Woodland management for the application of approved practices for Woodlands work.

In the case of cutting, the foreman heading up the woods crew will mark the trees or material to be cut, or, if given permission by the staff forester, members of the crew may assist in the marking.

Trees not marked for cutting must not be blazed or scarred by members of the cutting crew. All woods operations should be conducted in a manner that will be a credit to our organization and serve as a demonstration of proper practice for our cooperators to follow.

Fire Protection

Smoking while working in the woods should not be permitted during the fire season. Smoking periods may be allowed at designated places, free from inflammable material. Each woods crew should have available sufficient equipment for fire suppression needs.

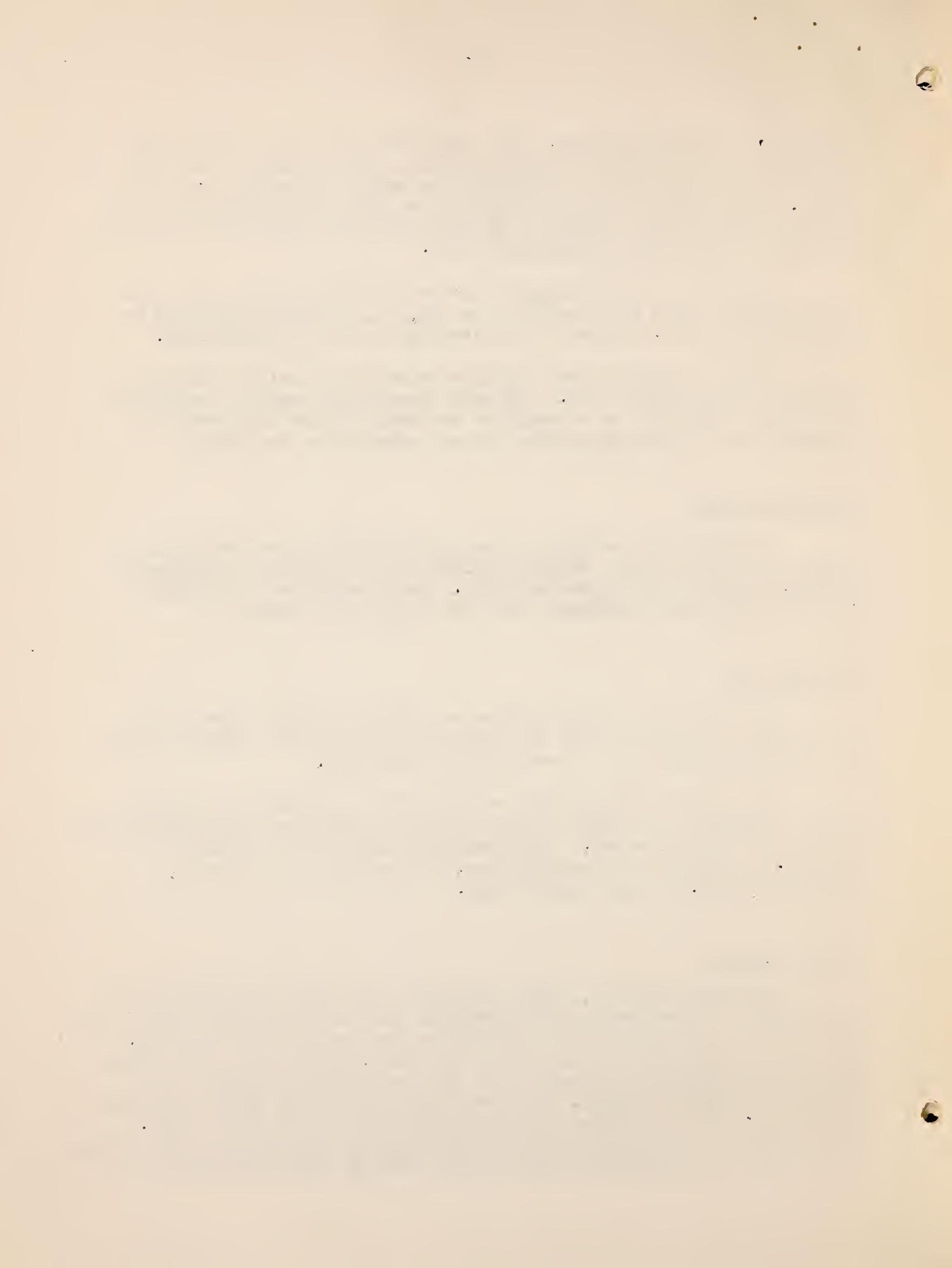
Cutting Area

All types of cutting will be on areas previously approved by the forester in charge or by the technician assigned the responsibility for Woodland work where a forester is not employed.

All cutting of woodland products will be confined to cooperators' property or to lands on which written permission to cut designated products has been secured. This permission may be in the form of a letter or a permit on a standard form, if covering public domain, National Forest, or other public land.

Brush Disposal

Wherever feasible, brush resulting from cutting operations will be utilized for erosion control purposes. In the use of this brush first preference will be given to the immediate area from which it was cut. On eroding sites and in some classes of timber, brush used on the ground may furnish protection comparable to that originally furnished by the living tree before removal. Live brush placed with the tops against the direction of flow in small incipient washes will hold a lot of soil. Sheet erosion on bare spots may be controlled by use of brush from cutting operations. If no erosion exists on the cutting area the brush may be



used for erosion control on nearby areas, or if none are within feasible hauling distance it should be lopped and scattered away from reproduction on areas of low plant density and left so that it lies within 18 inches of the ground.

Utilization

The need for various products on the whole project should be known prior to cutting, so that all types of material can be cut at one operation insofar as a given area will supply such products under proper and conservative cutting. When cutting post, stay and spreader posts material can often be cut from the same tree. Not only better utilization is accomplished but material is produced at less cost. Large trees will be split when additional post or other products can be secured. Juniper trees should not be cut below the size required to produce line posts, with the exception that material that must be removed to allow cutting of posts might provide stays or spreader posts.

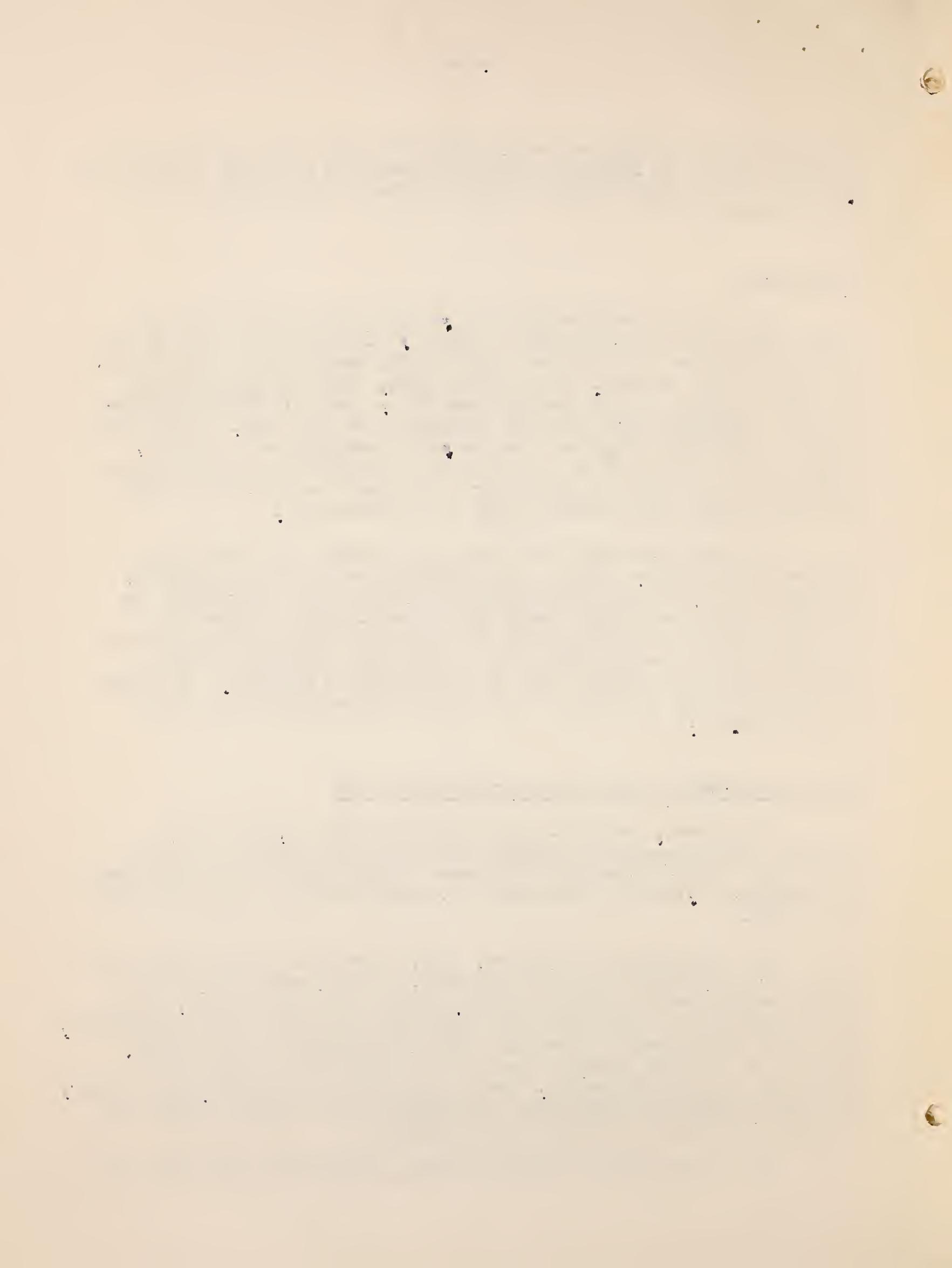
For small material, the stump height should not exceed the diameter of the tree. Larger trees should be cut as low as possible, preferably not over ten inches from the ground on the upper side. In the case of Juniper higher stumps will be permissible to allow for leaving suitable live limbs below the stump cut. Stay material should be worked up when needed from trees cut for other purposes so that utilization of cut material will be as complete as possible. The brush that is left will be utilized according to instructions given under "Brush disposal."

General Considerations on Type of Material to Cut

In general, the aim in harvesting material from forest or woodland stands consists of cutting those trees or portions of trees which have a utilization value and whose removal will be beneficial from the standpoint of forest production and unharful from a soil protection standpoint.

For practically all species, dead, overmature and diseased trees will be removed first leaving the younger, thrifty, growing stock for future production and site protection. Often those older trees, which may be growing at a very slow rate themselves, are suppressing young trees, and their removal may be beneficial from the standpoint of the stand. The removal of badly diseased trees is also desirable as they are a continual source of infection. From a utilization standpoint, dead timber, if usable, should be given prior consideration, and in open stands dead or dying trees may be all that can be spared.

In cutting younger classes of trees, removal is permissible for



the purpose of increased quantity or quality production, as long as adequate cover for soil and moisture conservation is maintained. This type of cutting usually constitutes a thinning or pruning, and usable products may thus be harvested and the stand improved by the operation.

The following types of green material may be cut in accordance to the cutting policy outlined for each species:

1. Old timber plainly decadent.
2. Mature live trees or limbs on a selection cut basis.
3. Young timber on a thinning or stand improvement basis.

In cutting woodland products the type and amount of material which can be removed varies with the type of vegetation, slope, soil, and erosion conditions, and, as various combinations of the factors involved will be encountered in the field, it is not practical to give detailed instructions covering every possible situation, and individual judgment must be relied upon in the application of cutting rules. In general, the policy is to be conservative on those areas having the least cover.

SPECIES CONSIDERATIONS

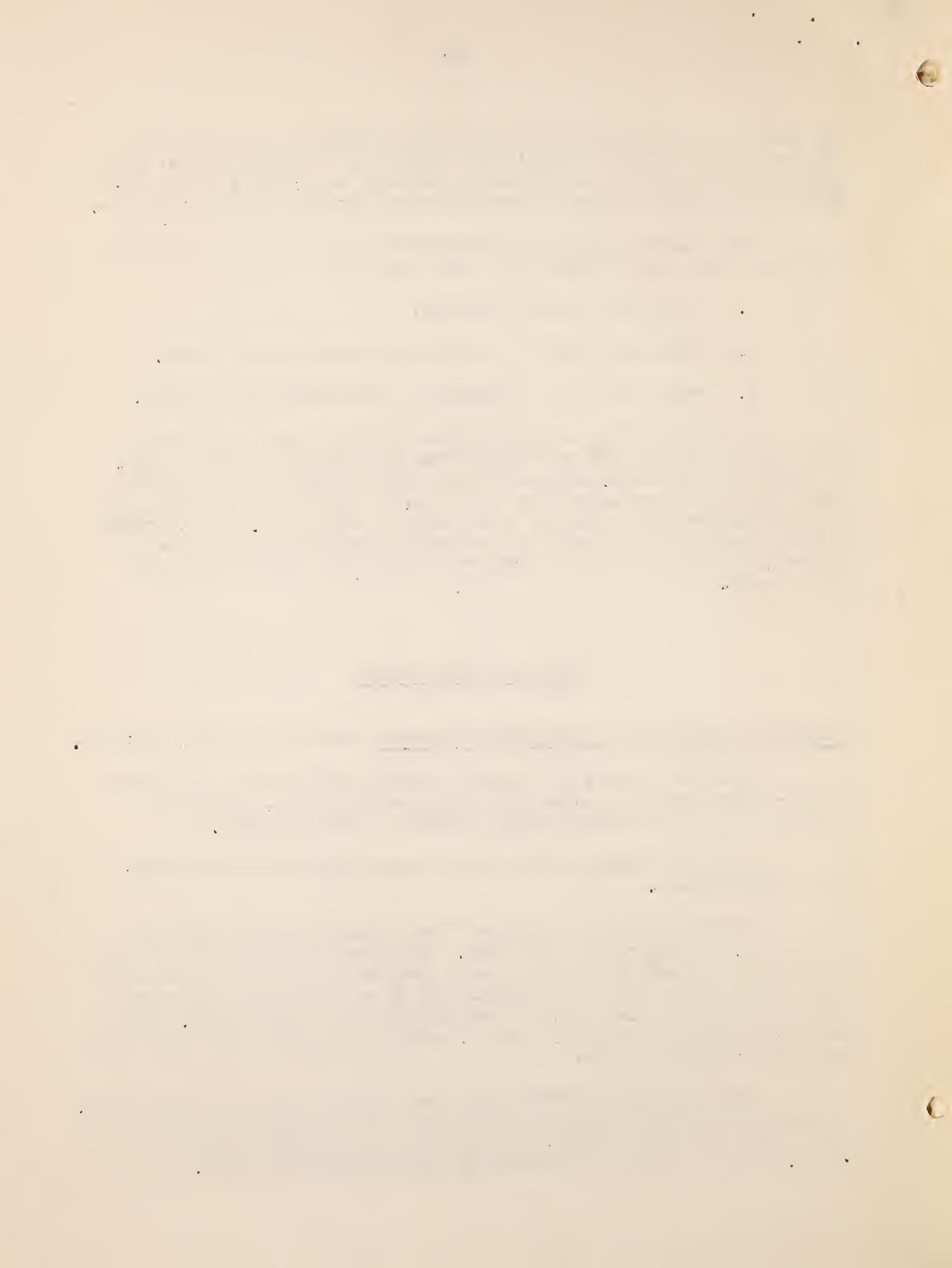
Juniperus monosperma and *Juniperus utahensis* (One-seed and Utah Juniper).

These two species have similar growth habits and may be either single-stemmed trees or quite bushy with several stems. The products desired may be fence posts, stays, spreader posts or brush.

Dead and decadent timber will be considered first in cutting for fence material.

Thrifty trees may be removed from clumps, or large limbs may be removed, leaving part of the tree. The objective in selection will be to leave adequate cover of the most thrifty type of tree found on the area. Good seed-bearing trees should not be removed from open stands unless reproduction is adequate for production of a good stand. Where reproduction is established, however, cutting the older trees may benefit the younger growing stock.

Young trees and thrifty older trees should not be cut from steep, eroding slopes or open stands. Where this type of timber can be removed from clumps and dense stands, without material reduction in protective cover, it may be cut on a thinning or stand improvement basis.



Old, decadent trees may be cut on areas having active erosion if the brush from the cutting is utilized to stabilize the soil on the cutting area and proper grazing use will obtain. In the absence of control of grazing such trees should not be removed.

When removing limbs care must be taken not to split or peel the trunk of the tree. Never leave a stub when removing limbs; make the cut flush with the main stem.

In addition to the brush resulting from fencing operations, limited amounts of branches may be provided for brush dams or spreaders when such material may be taken with no detriment to the stand.

For this type of material younger clumps may be thinned by cutting a portion of the stems, leaving the straightest and best stems for post production. The quantity of branch material removed will vary not only with stem foliage, slope and erosion conditions, but also with the number of branches per tree and its soil protective efficiency. This type of cutting should always be conservative.

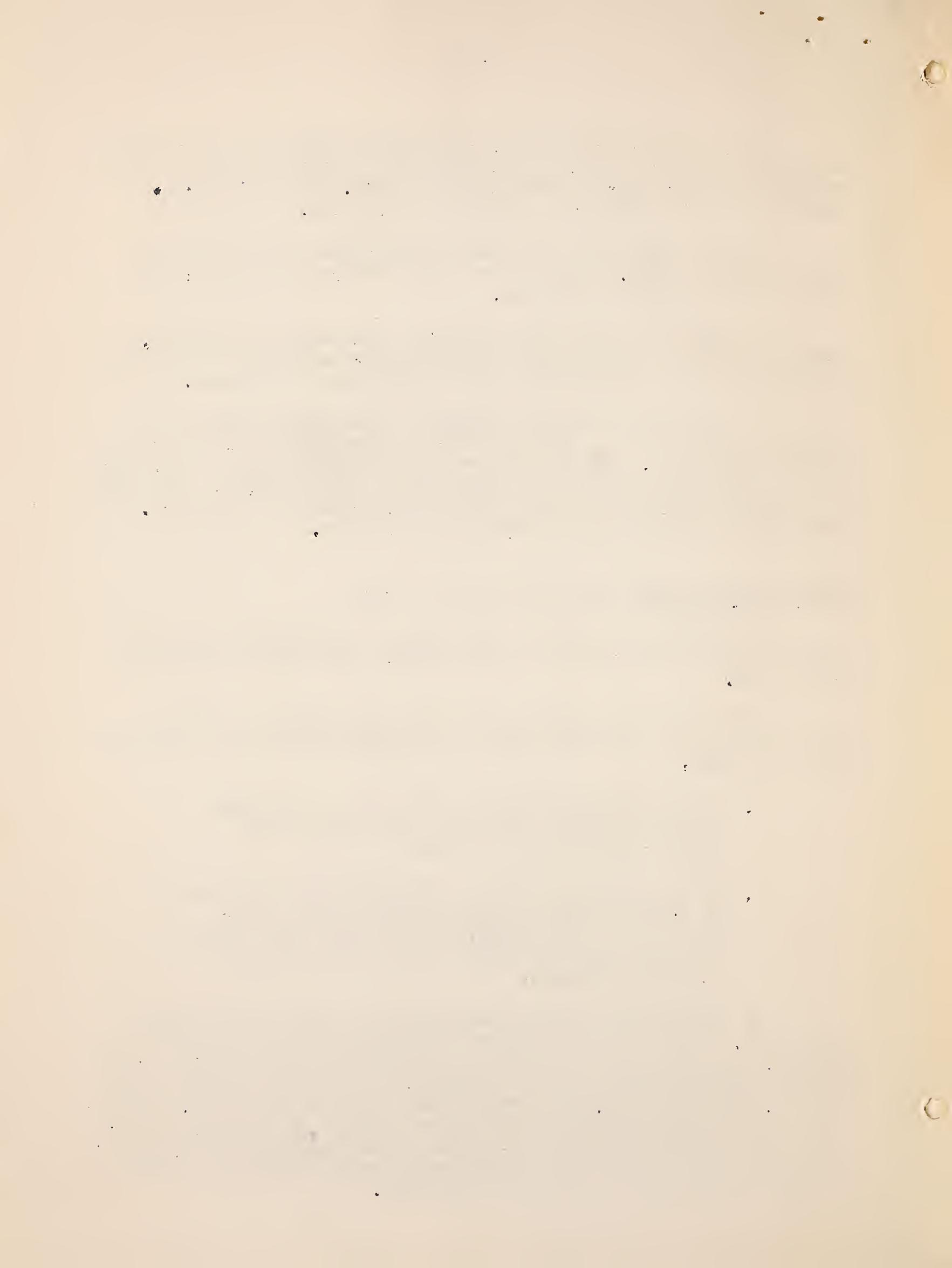
Juniperus scopulorum (Rocky Mountain Red Cedar)

The growth habit of red cedar varies in form from trees with single stems to those which are quite bushy. The former condition is most common.

Branches of this species will live and continue to grow if left below the cut. The development of the branches left may occur in one of two ways:

1. If the branch or branches left have a relatively vertical position they will straighten to some extent and increase in growth.
2. If the branch or branches left are about horizontal in position and have small limbs on their upper surfaces near the stump, some of these small limbs will accelerate in growth and may later produce desirable products.

In cutting, dead and old decadent trees will be given first preference. Large trees overtopping reproduction should be marked for cutting. For trees large enough for line posts but not crowding or suppressing reproduction, leave, if possible, at least two branches below the cut. In some cases, more branches may be left if present, the number depending upon the size of the stump. Many of the larger, single-stem trees will have no basal branches. On multiple-stem trees, two or more good stems may be left. In all cases, vertical branches should be left in preference to horizontal branches.



No trees should be cut below the size required to produce line posts. Young, fast-growing trees should not be cut for posts even if large enough, unless the heartwood meets post size specifications. The sapwood of this species is not durable. Large trees should be split to produce the maximum number of usable posts.

This species should not be cut for brush, except in the case of stand improvement, and then only on a conservative basis.

Old trees may be cut for brush which are of poor form and have little or no usable wood products, provided they are interfering with existing reproduction and their removal will occasion no openings of sufficient size to markedly lower the protective value of the site.

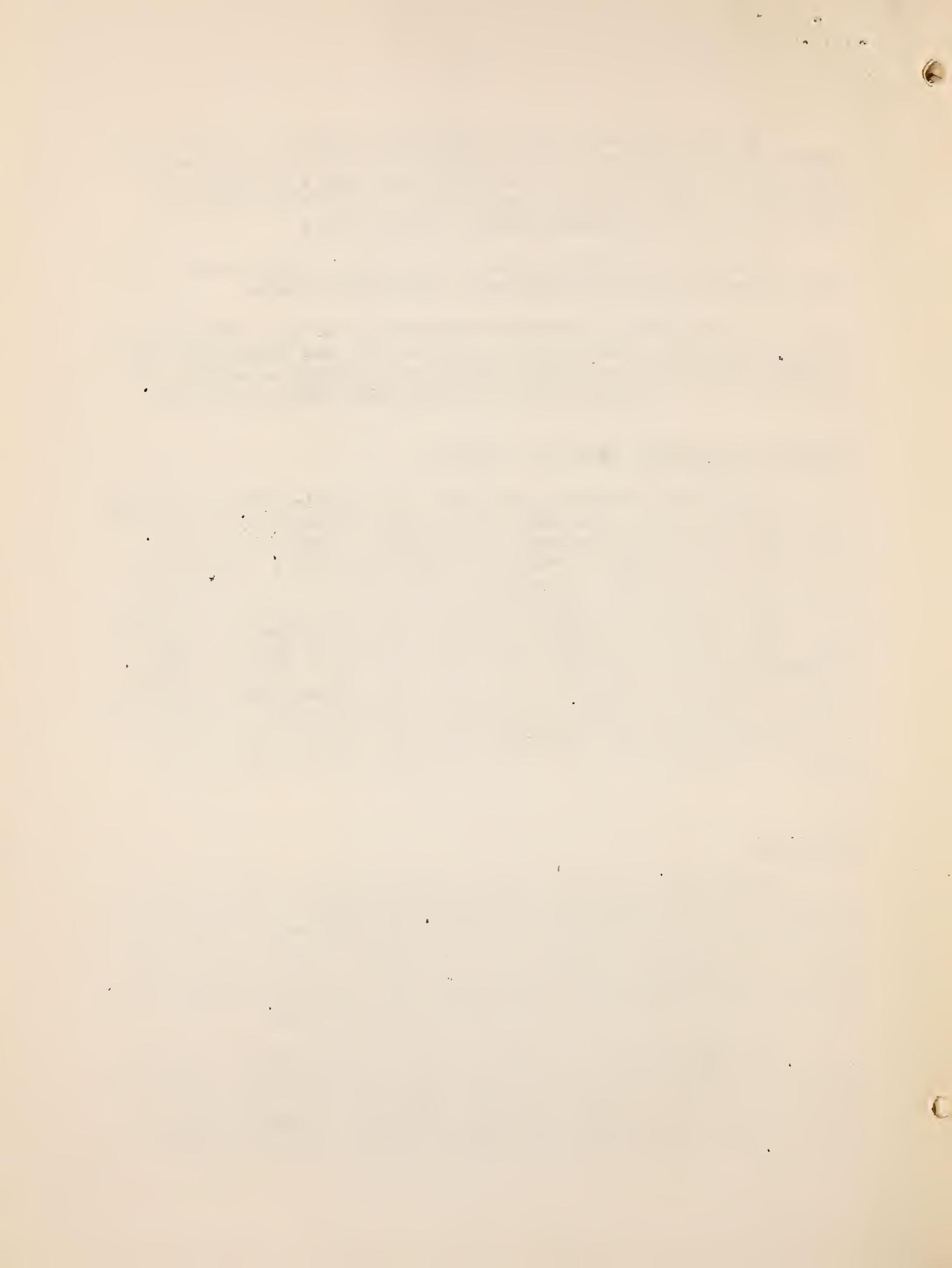
Juniperus pachyphloea (Alligator juniper)

This species produces good fence posts and is commonly used for wood products and for brush for erosion control structures. It grows to large size, and the mature trees often produce quantities of brush. The larger trees should be removed and split for posts. Selection of trees should be made where advance reproduction of the same or other species can be released, where adequate cover for soil protection needs is at hand. No trees should be cut below the size required to produce line posts. Brush should not be obtained from young trees, except in special instances, and then only from trees over six inches D.B.H. upon approval of the forester in charge, with stipulations covering conservative removal of limbs. Brush may be obtained from old, rough trees having little or no wood products, where their removal will release reproduction present and still allow for proper conservation of the soil.

Gambel Oak

Gambel oak, or related species, may be cut for post and stay material. For fence post use, a minimum top diameter of three inches is usually required for standard line posts. In addition, the post must be sound or free from rot and placed in the ground with the bark intact within two weeks after cutting or before the post has a chance to dry. For stays, green material can be procured on a stand improvement basis, leaving good, straight stems for future post production.

Cutting with saws is desirable, and a stump height of 2 to 4 inches, depending on the size of the stem, is good practice. Brush from post and stay cutting must be properly disposed of, and if brush is desired for erosion control structures it should be procured from trees of poor form, leaving the better stems for future growth and usable products.



In all instances, it is important to consider the protective needs of the site in the removal of material for usable wood products or brush.

Pinus edulis (Pinon pine)

Pinon pine is not desirable for fence post use so has been used but little in field operations. However, considerable quantities of branch material has often been obtained for erosion control structures.

For all stands, entire trees should not be cut for the purpose of obtaining brush unless they can be removed to release various species of Juniper and other species of greater value or unless special approval is given by the forestry officer in charge covering other situations. If branch material is needed, obtain from trees on slopes which are not judged to present unwarranted erosion hazards, taking branches to the extent that not over 20% of the crown is removed, leaving in every case basal branches to hold the litter in place. Branches should not be removed from trees 5" D.B.H. and smaller. Only in stands of good density and ground cover will it be permissible to remove the basal litter holding branches, and then only with the approval of the forester in charge.

In stands of overmature pinon, with advance reproduction present, old trees may be removed where sufficient young growth will be released. Stem and branch wood should be used for erosion control work, fuel or other useful purposes by the Soil Conservation Service, or wood material may be marked for removal by the local population or the cooperator.

These cutting practices are based upon inadequate knowledge of silvicultural requirements of the various species considered. They will be revised from time to time as further knowledge is available. Good judgment is a prerequisite to proper application, and, in case of doubt as to action to be taken, always be conservative.

